

CURRENT LITERATURE.

MINOR NOTICES.

MESSRS. SEYMOUR AND EARLE¹ have issued a supplement to their series of economic fungi. It consists of forty packets of dried specimens, ten being species of *Peronospora* and *Synchytrium* marked *A*, and thirty of various *Uredineæ* marked *B*. The system of numbering is not explained, and, in fact, the printed matter accompanying the distribution consists only of a folded leaf bearing the title page and contents. Nearly a score of botanists have contributed to this first fascicle. The specimens are excellent, and the publication will doubtless meet with favor.—J. C. A.

NOTES FOR STUDENTS.

BULLETINS ON WEEDS are issued by the experiment stations from time to time and add greatly to a knowledge of the habits and distribution of this class of plants. A recent paper by H. Garman (Ky. no. 70, pp. 99-107, *pls.* 2) on "Woolly mullein (*Verbascum phlomoides*) in Kentucky" brings into notice a new roadside and riverside weed. At present it has invaded an area of about fifty square miles in the vicinity of Green river. It is a weed of waste ground rather than of cultivated fields.

"A first Ohio weed manual," by A. D. Selby (Ohio no. 83, pp. 247-400, *figs.* 1-71), forms a thick bulletin and gives information regarding 279 species of plants that should be subdued by the cultivator. Although the species are arranged in the usual systematic sequence, technical diagnoses are not employed. In their stead the striking features that would appeal to the untrained observer are clearly and simply set forth. Besides giving characters which assist in identifying the plant, the seeds are described so that they may be recognized when found in commercial seeds, and what is known regarding the noxious habits of the plants as well as practical methods of subduing them, form an important part of the presentation. The work closes with a tabulation of the distribution of roadside weeds in Ohio, from data furnished by 357 correspondents. The bulletin is an admirable and serviceable contribution to the literature of weeds.

¹SEYMOUR, A. B., and EARLE, F. S.—Economic fungi supplement, including species of scientific, rather than of economic interest. Nos. *A* 1-10, *B* 1-30. Cambridge, Mass. 1898.

The "Fifth report of Kansas weeds," by A. S. Hitchcock and Geo. L. Clothier (Kans. no. 76, pp. 1-23, *pls.* 12), deals with the vegetative propagation of forty-eight perennials. A dozen plates with well-drawn figures illustrate the subterranean parts and habits of each sort of plant. Tests were made to determine the length of cuttings of roots or rhizomes that would throw out adventitious buds and become established as independent plants. The station is doing good work in issuing its series of weed studies.—J. C. A.

ELENCHUS FUNGORUM NOVORUM for the year 1897 appears in the April number of *Hedwigia*. It is prepared by G. Lindau and P. Sydow, and forms a third similarly published supplement to Saccardo's great *Sylloge Fungorum*. It is interesting to note that the enumeration of species published during 1895 reached the grand total of 1252, for 1896 of 1313, and for 1897 of 1476. This indicates increasing activity in the study of this class of plants. The enumeration does not include lichens and bacteria, but does include the myxomycetes and the myxobacteria.—J. C. A.

THE SPREAD of plant diseases was presented in a lecture before the Massachusetts Horticultural Society by Dr. Erwin F. Smith more than a year ago, but has only recently been printed and distributed. Much stress is laid upon the agency of insects, as they are especially prominent in the spread of pear blight, bacterial wilt of cucurbits, and bacterial brown rot of solanaceous plants, if not exclusively responsible for it. Slugs are known to distribute a number of diseases, including the bacterial brown rot of cabbage. Other methods of distribution are discussed, such as manure, soil, seeds, tubers, etc. A brief statement of preventive measures closes the lecture.—J. C. A.

RECENT BULLETINS from the experiment stations pertaining to vegetable pathology are as follows: "A bacterial disease of sweet corn," by F. C. Stewart (N. Y., no. 130, pp. 423-439, *pl.* 4), deals with a disease heretofore unrecognized. It is a bacterial disease attacking the plant at any stage of its growth, but more often at flowering time, causing the plant to wilt by clogging the fibrovascular bundles of the stem. The germ has been separated and inoculation experiments tried. It does not grow in field corn or pop corn. A review of the "cornstalk disease" of cattle, by A. T. Peters (Neb., no. 52, pp. 51-63), confirms the conclusion of some previous investigators that it is due to a germ entirely distinct from that causing the Burrill disease of corn, which in turn is distinct from the corn disease mentioned above. "A bacterial rot of cabbage and allied plants," by H. L. Russell (Wis., no. 65, pp. 1-39, *figs.* 15), has already received notice in this journal (25:67). "The olive knot," by F. T. Bioletti (Calif., no. 120, pp. 1-11, *pls.* 3, *figs.* 2 in text), is an account of a disease which is more generally known under the name of tuberculosis of the olive. It was first seen in California in 1893, and is yet known in only one

locality. The disease is well described and illustrated. The germ causing it, *Bacillus Oleæ* Arch., was but little studied. Part of a bulletin (Ky., no. 72, pp. 9-23) is given to a report on the prevention of potato scab, by H. Garman. A detailed record of the work in 1896 and 1897 with use of corrosive sublimate shows very favorable results. In 1896 flowers of sulfur was also used, being placed in the drill with the seed tubers, but gave no benefit. "Blight and other plant diseases," by C. S. Crandall (Colo., no. 41, pp. 1-21), includes a good general account of pear blight, both historical and descriptive. Less extended descriptions are given of sun-scald and frost-cracks in fruit trees, leaf blight of strawberry, orange rust and anthracnose of raspberry and blackberry. A finely illustrated and well written bulletin on "Some important pear diseases," by B. M. Duggar (Cornell, no. 145, pp. 592-627, *figs.* 15) describes at length a leaf spot (*Septoria piricola* Desm.) that has heretofore received little attention. It is especially injurious to budded stock of two years or older, and is also prevalent in orchards, attacking only the foliage. Sprayings of Bordeaux mixture were found effective. It was studied microscopically, and also cultivated by the bacteriological method. A less extended account is given of leaf blight (*Entomosporium maculatum* Lev.), which has been confounded with the preceding, scab (*Fusicladium pirinum* Fckl.) and blight (*Bacillus amylovorus* Bur.), with original observations in each case and a brief bibliography. Notable results were obtained in imbedding and sectioning dense stromal tissues. "Rust and leopard spot, two dangerous diseases of asparagus," are described by W. G. Johnson (Md., no. 50, pp. 163-168, *figs.* 2), and their treatment indicated. The second-named disease is caused by an undetermined fungus, the first by *Puccinia Asparagi* DC. "Results with oat smut in 1897," by C. P. Close (N. Y., no. 131, pp. 441-154, also popular edition of 6 pages), show treatment with hot water, formalin, lysol, potassium sulfid, and Ceres powder, to have been effective in the order named, none of them being injurious to the seed. The same investigator has issued a bulletin on "Spraying in 1897 to prevent gooseberry mildew" (N. Y., no. 133, pp. 489-500, also popular edition of 6 pages), showing potassium sulfid to be a remedy far superior to Bordeaux mixture, lysol, or formalin. "Experiments and observations on some diseases of plants," by F. C. Stewart (N. Y., no. 138, pp. 625-644, also popular edition of 6 pages), demonstrates that the popular opinion that green manuring with rye to prevent potato scab, and the use of common salt on carnations to increase growth and prevent rust, have no rational basis. It is further shown that potato stem-blight (cause unknown) is not contagious, and that spraying cucumbers with Bordeaux mixture is especially serviceable against mildew (*Plasmopara Cubensis*). Interesting notes are given on the last named fungus, including a first record of its occurrence on *Cucumis Moschata* Duch. "Prevalent diseases of cucumbers, melons, and tomatoes," by A. D. Selby (Ohio, no. 89, pp.

99-122, 3 pl.), is an account of *Plasmopara Cubensis*, *Colletotrichum lagenarium*, and *Septoria Lycopersici* in Ohio, and efficient means to check them. Brief notes on corn diseases, by L. H. Pammel, and alfalfa leaf spot, by R. Combs (Iowa, no. 36, pp. 854-855, 858-859), are given as abstracts from the annual report of the Iowa Station for 1897.—J. C. A.

AN EXCELLENT illustrated paper on the "Fungous foes of the farmer" has been prepared by Dr. Byron D. Halsted for the Pennsylvania Department of Agriculture, and has been issued as bulletin no. 28 (1897). It is printed and distributed by the state at Harrisburg, Pa.